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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,589	03/08/2006	Alain Mazuir	05021045	2276

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EXAMINER	
FERNANDEZ, KATHERINE L	
ART UNIT	**PAPER NUMBER**
3768	
MAIL DATE	**DELIVERY MODE**
08/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/565,589	MAZUIR ET AL.	
	Examiner	Art Unit	
	Katherine L. Fernandez	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/23/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The Information Disclosure Statement submitted on January 23, 2006 is acknowledged. The Information Disclosure Statement meets the requirements of 37 C.F.R. 1.97 and 1.98 and therefore the references therein have been considered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Aprahamian et al. (US Patent No. 6,393,315).

With regards to claims 1 and 4, Aprahamian et al. disclose a method and device for detecting and locating the difference in density and/or structure and/or chemical composition of a biological tissue (column 1, lines 12-15) which is subjected to continuous illumination in a first determined band of frequencies (column 3, lines 3-12; column 4, lines 37-42, referring to luminous excitation by two spectral bands (one centered on about 590 nm and the other centered about 400 nm; column 6, lines 22-37, referring to light provided by a luminous excitation unit, such as lasers or lamps), able to cause the tissue to generate a phenomenon of fluorescence, auto-fluorescence or

luminescence in a second band of frequencies (column 4, lines 43-62), characterized in that it comprises the steps of: capturing an image of the biological tissue illuminated in this way, using color video means provided with image sensors with a mosaic of pixels provided with filters of complementary colors (column 4, lines 43-62; column 6, lines 1-7, 38-39, referring to CCD digital camera), for each point of the image so obtained: a) collecting data related to the energy received by each pixel, so as to reconstitute the image of the biological tissue (column 4, lines 43-62; column 6, lines 22-33, referring to a computing unit for point by point or pixel by pixel processing of images collected), b) amplifying the signal corresponding to the energy received in the second band of frequencies so as to characterize or cause to appear the said difference of the biological tissue in the image obtained (column 5, lines 14-59, referring to image processing performed to obtain better visualization of the inflamed portion; column 6, lines 45-49, referring to image intensifier).

With regards to claim 2, Aprahamian further disclose that the data collected n the second band of frequencies is processed so as to characterize the structure difference obtained in a color other than the color naturally corresponding to this second zone of frequencies (column 4, line 63 through column 5, line 13).

With regards to claim 5, Aprahamian further disclose that their device comprises processing means (column 5, lines 60-63; column 6, lines 1-7, lines 22-33, referring to computing unit for pixel by pixel processing of images collected) to process data collected in the second band of frequencies, so as to characterize the structure

difference obtained in a color other than the color naturally corresponding to this second zone of frequencies.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aprahamian et al.

With regards to claims 3 and 8, Aprahamian et al. do not specifically disclose that radiations are added to the band of frequencies of the illumination spectrum that are able to modify the fluorescence spectrum to shift the fluorescence band of parasite fluorescence. However, they do disclose normalization of the images collected from different band of frequencies and adding the images taken at different band of frequencies in order to increase the contrast of the inflamed portion (i.e. decrease the effect of parasite fluorescence on the image) (column 5, lines 38-63). At the time of the invention, it would have been obvious to have modified the fluorescence spectrum. The motivation for doing so would have been to increase the contrast of the difference between the images, as taught by Aprahamian et al. (column 53-63).

7. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aprahamian et al. in view of Jung et al. (US Patent No. 5,880,826).

Aprahamian et al. meet most of the limitations of claim 6. However, they do not specifically disclose that the image-capturing means consists of monochrome image sensors, namely a luminance sensor and at least one sensor provided with a filter of the color corresponding to the color of the fluorescence emitted during detection of a difference it is sought to detect. Jung et al. disclose that their system and method includes the use of a monochrome optical sensor array, such as a CCD-type sensor element (column 24, lines 36-54). They further disclose that their device and method uses a plurality of perimeter sensors (i.e. luminance sensor) and a plurality of color sensors (column 19, lines 22-26; column 31, lines 35-51). At the time of the invention, it would have been obvious to one of ordinary skill in the art to include the above listed elements to the method and device of Aprahamian et al. The motivation for doing so would have been to determine the color/optical characteristics of the object, as taught by Jung et al. (column 31, lines 45-51).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine L. Fernandez whose telephone number is (571)272-1957. The examiner can normally be reached on 8:30-5, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni M. Mantis-Mercader can be reached on (571)272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER
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